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ABSTRACT

Characteristics of Associate Degree Nursing (ADN) programs in New York State which relate to the achievement of their graduates on the State Board Test Pool Examination (SBTPE) were identified. A questionnaire was designed and mailed to all two-year colleges in the states offering the ADN. A total of 32 questionnaires were returned (91 percent). The criterion variable for the analysis was the percent of first time candidates from the school who passed th licensing examination between 1970-73, with the four years averaged. Program visits were carried out in eight schools, and student data were collected in these same schools. The questionnaire data, which were numerical, were coded and analyzed using t-tests of differences between means of the top and bottom group categories. The more subjective interview data were described as to the program characteristics found to a greater degree in the high-achiever programs. In general, the study results showed that programs doing well on the licensing exam were also making noteworthy attempts at providing quality nursing education. Strong support was given to the conclusion that the passing rate on the SBTPE could be improved through student selectivity and providing a strenuous, selective program. Findings also indicated that nursing programs providing quality education were capable of maintaining high passing rates while admitting less academically qualified students. (Appendixes provide the Nursing Education Unit Records, Survey of Associate Degree in Nursing Programs, Interview Schedule, Student Survey, Program Survey Descriptions, Summary Descriptions from Program Visits, Student Descriptions, and Pearson-Product Moment Correlations.) (DB)

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PROGRAM AND STUDENT CHARACTERISTICS RELATED TO THE PERFORMANCE OF NEW YORK STATE ASSOCIATE DEGREE GRADUATES ON THE REGISTERED NURSE LICENSING EXAMINATION

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By

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In Cooperation with

The Nursing Education Unit
Office of Professional Education,
The Bureau of Two Year College Programs

and

The Office of Occupational Education
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PREFACE

The foundations for achieving educational accountability lie hidden among the diverse policies, practices, and programs of the various institutions that have a history of success. The examination of such successful programs may reveal policies and practices that can be demonstrated as keys to program success. The presence or absence of similar policies and practices in less successful programs may provide a mirror against which these key practices and policies can be validated.

Fundamental to this approach is the identification of criteria for making the judgment that a given program is a successful program. A single criterion, performance on the State Board Test Pool Examination, was adopted for purposes of this study. Since successful performance on that examination is a prerequisite to licensing and practice, the criterion has legal stature. The decision to use this single criterion has, at one and the same time, implications for additional research on the performance of those who actually completed the SBTPE requirements and entered practice.

Martha Muncrief and her colleagues have carefully structured this report to speak to those non-professionals who have responsibilities for establishing the guidelines for discretionary action by professionals with program responsibility; for those professionals responsible for organizing and conducting local programs; for those responsible for state-wide supervision, and for the researcher.

It is hoped that the proposed Program Evaluation Inventory will prove useful to faculties in their continuing efforts to re-examine and improve their programs.

John Wilcox
Director, CIOE

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From the very beginning stages, this project was a cooperative effort of the Nursing Education Unit and the Bureau of Two-Year Colleges (both part of the New York State Education Department) with the Cornell Institute for Research and Development in Occupational Education. Mildred S. Schmidt, Chief of the Nursing Education Unit, and Gene M. Winter, Associate Director of the Cornell Institute, were instrumental in proposal development and contributed advice at critical implementation stages. Lawrence Gray and Paul Chakonas of the Bureau of Two-Year Colleges acted as exofficio members of the Advisory Council and provided helpful suggestions at many points.

In the implementation stage, this project is indebted in large part to the efforts and expertise of Barbara Pieta, Supervisor, Nursing Education Unit. Barbara participated actively in the project design, instrument development, data collection, and final report writing and editing. Jill Posner, Research Assistant with the Cornell Institute, was primarily responsible for collecting, analyzing, and reporting student survey data. Gene Winter was invaluable in editing technical material and reacting to the report drafts on numerous occasions.

Special mention is due to the project consultants:

Virginia Allen, Chairman, Department of Technical Nursing, University of Vermont, Burlington, Vermont

Helen C. Belcher, Director of Nursing Programs, New England Board of Higher Education, Wellesley, Massachusetts

who were members of the site visitation team and performed a major role in interpreting the information obtained during the visits. Their experience and expertise in the nursing education field can only increase the validity of the findings.

The project was also assisted by the Advisory Council: Carole Cashion, Jefferson Community College; Kathleen Mack, Genesee Community College; Alice Perry, Rockland Community College; Avis Pittman, Bronx Community College; Joan Sweeney, Junior College of Albany; and Joan Thompson, Nassau Community College. Their enthusiasm, interest and candid suggestions have increased the utility of the Program Evaluation Inventory.

Finally the project is indebted to the chairpersons and staff of the thirty-two colleges responding to the questionnaire. Special appreciation is extended to the Departments of Nursing in the following 10 colleges who participated in the field testing:

Adirondack Community College

Agricultural and Technical College at Morrisville

Borough of Manhattan Community College

Jamestown Community College

Kingsborough Community College

Mohawk Valley Community College

Monroe Community College

Onondaga Community College

Queensborough Community College

Rockland Community College

Martha Muncrief
Research Associate

RESUME

OF

THE

PROJECT

I. INTRODUCTION

Historically, the need for nursing care has exceeded the available number of nurses in the labor force. This undersupply of nursing personnel has now been partially alleviated by a decline in population growth and an increase in numbers of nursing graduates, although shortages will continue to occur in some regions of the country.

With the sheer number of nurses no longer a major cause of concern, the time has come to concentrate attention on the quality of nursing education. Eventually this should include an assessment of the quality of the entering student, the instructional program, the graduate's on-the-job performance.

As a beginning step, this project was conceived to focus on only one indicator of quality. . . the passing rate for licensure as Registered Nurses. . . and involves only one type of program. . . the Associate Degree in Nursing. In order to qualify and work as a Registered Professional Nurse it is necessary for the student to (1) complete the requirements for the degree or diploma established by the institution and (2) pass the New York State Registered Nurses licensing exam. From 1968-1973 the percentage of ADN graduates who have passed the licensing exam on the first try has fluctuated between 59 and 62 percent. In other words, four out of every ten students who completed their formal preparation for nursing did not qualify for licensor as Registered Professional Nurses on their first examination[1].

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[1] Educational Preparation for Practical and Professional Nursing in the State of New York, 1972, The University of the State of New York, the State Education Department, Office of Professional Education, Nursing Education, 1973, p. 13.

When these New York State data are compared with national statistics, a second concern is raised. Associate Degree graduates for the country as a whole exhibited a higher passing rate on the licensing rate than ADN graduates in New York State. The national passing rate was 10% greater than the New York State rate in 1967-1968 and 16% greater in 1971-1972[2].

Both the Board of Regents and the Nursing Education Unit, State Education Department, expressed concern about these comparisons. A proposal to study the factors affecting the performance of Associate Degree Nursing graduates on the State Board Test Pool Examination (the licensing examination) was cooperatively developed by the Cornell Institute for Research and Development in Occupational Education and the Nursing Education Unit. The project proposed to identify factors associated with a high passing rate on the SBTPE and then to use the factors in the development of an Inventory to assist the Associate Degree Nursing programs in self-evaluation.

II. PROCEDURES

A review of related literature in nursing education and program evaluation was used to identify factors which might be related to success on the licensing exam and/or quality of the program. Personnel in the Nursing Education Unit of the State Education Department identified additional factors based upon their experiences with Associate Degree Nursing programs.

Nursing Education Unit records were available as a preliminary source of information about all nursing programs in New York State. Scores on the State Board Test Pool Examination for each ADN program were available from these records as well as several other types of comparable information (Appendix A).

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[2]Ibid., p. 14.

Since some data are collected only at the time of program registration, a questionnaire was designed to obtain additional information directly from each program (Appendix B). The questionnaire was mailed to all colleges in New York State which has graduated at least three ADN classes. Thirty-two of the 35 questionnaires were returned completed.

Many of the factors identified as having a possible relationship to success on the licensing exam were too subjective to be included in a mailed questionnaire. These factors were grouped under various headings and an interview format was developed and field tested (Appendix C). In addition, a student information sheet was developed for collecting data about the 1973 Associate Degree Nursing graduates in selected programs (Appendix D).

Because some program and student characteristics could not be examined adequately through a search of existing records or a mailed questionnaire, the decision was made to do an in-depth study of some programs. The criterion variable for sample selection was the percent of first time candidates from the program who passed the licensing examination between 1970-73 with the four years averaged. Eight colleges were selected for visits: three programs consistently ranked in the top third of all programs categorized by passing rate, two programs consistently improving, and three programs consistently ranked in the bottom third.

Program visits were scheduled in advance and were each one full day in length. The visitation team consisted of a senior staff member from the Nursing Education Unit, an out-of-state nursing education consultant, and the project researcher. Student data was collected in the same eight programs. A project research assistant visited six of the schools personally to gather the information from their records. Two schools provided

the available information by hand compilation and/or computer printout.

Questionnaire data which were numerical in nature were coded and analyzed using T-tests of differences between means of the top and bottom group. Descriptive information is provided in Appendix E for all programs. As a technique for handling the more subjective data obtained during interviews, the visitation team members described the program characteristics found to exist to a greater degree in the high achiever programs.

III. FINDINGS

The reader is referred to the Technical Report for a more complete description of the findings of this project. No attempt is made to establish causality between each characteristic and achievement on the licensing exam. It was possible, however, to isolate a number of characteristics associated to a greater degree with high achievement on the licensing exam.

The following vignette is intended to capture the general character of the high achiever program. While it is a composite description, such programs really were found to exist.

Departmental administration has been very stable: the present chairperson is the second person to hold that position in the 10 year history of the program. Expansion has been gradual and has now leveled off at 184 students in the nursing program. The chairperson has a clear interpretation of the purpose of the ADN program and has a compatible working relationship with college administration and her own faculty. She/he employs constant use of small studies to feed information into the program and to provide direction for faculty.

Faculty composition has changed over the past years but a stable, core faculty group has remained. Both students and chairperson perceive the faculty as expert clinicians. The visiting team members were particularly

aware of such personal characteristics as vitality, enthusiasm, and commitment to teaching.

College and nursing department admission policies involve screening students in order to be highly selective. Approximately 85% of graduating students pass the licensing exam on the first attempt. The typical student who passes the exam is married, had both a high RSE score and secondary school average as an entering freshman, and was doing well scholastically in both nursing and non-nursing courses at the college level. Morale among nursing students appears to be high with a general attitude of confidence and pride in coping with a strenuous curriculum. The curriculum is organized around clinical content areas with clear mechanisms for coordination of instruction. Objectives are clearly stated in writing, have been communicated to students, and most are in measurable terms. A climate of innovation is evidenced by the presence of abundant teaching materials and media in use. When compared with programs whose students are doing less well on the licensing exam, this program tends to have more hours of classroom and campus laboratory instruction and fewer hours of clinical instruction.

Nursing laboratories are well equipped and staffed with a trained person to assist the nursing students. The college and nursing department are located in very appealing physical surroundings; classrooms and laboratories are spacious and attractive.

Curriculum revision is a continuous process of reviewing and questioning existing practices in terms of how the progeam could best enhance student learning. Evaluation of student achievement is well-planned, frequent, and a departmental endeavor. Students are helped to prepare for SBTPE through review techniques incorporated into each course and practice

in handling test items similar to those used on the licensing exam is provided.

IV. CONCLUSIONS

In this project the use of SBTPE scores was viewed as a useful but limited measure of a program's success in preparing qualified nurses. The SBTPE measures only certain aspects of a student's competencies and is not designed to test program effectiveness. It is of interest to note that chairpersons and faculty members reported few inconsistencies between efforts "to be successful on the State Board Test Pool Exam" and efforts "to be successful in providing effective nursing education". Stated in other terms, programs doing well on the licensing exam were also making noteworthy attempts at providing quality nursing education.

If a low passing rate on the SBTPE is viewed as a major problem, then primary emphasis should be given to selecting highly qualified students and providing a strenuous, selective program for them. Findings from this study indicate that a higher passing rate on the SBTPE could result within two or three years.

If, however, a college is committed to open admission and full opportunity policies, primary emphasis must then be given to remediation activities and to improving the process of nursing education. The findings include many program variables that were found to be related to the passing rate on the SBTPE. Implementation of these findings should be helpful but are likely to have little immediate effect upon a low passing rate. Each program must make a decision concerning student selectivity after consideration of college policy and philosophy.

This study is a first step in developing a data base which hopefully will lead to more precise techniques for ADN program evaluation. There

are some strong directions suggested for ADN programs that desire to improve their performance on the licensing examination. There are also many subtle inferences about program differences which are deserving of further study. These characteristics may be related to both performance on the licensing examination and to quality nursing education (if indeed these two phenomena do not always co-exist).

T E C H N I C A L

R E P O R T

I. INTRODUCTION

Background

The New York State Associate Degree Nursing Programs were based on the premise that,

> the constantly increasing discrepancy between the need for nursing services and the supply of nurses makes it imperative that more students be enrolled in schools that prepare for nursing. The burden which now falls so heavily upon hospital schools of nursing must be accomplished by establishing new programs in the new type of educational institution in which an increasing proportion of the youth of America are enrolling, namely, the junior or community college.[3]

From the first experimental programs in 1952 this new approach to nursing education has grown steadily so that in 1974 there are 40 Associate Degree Nursing Programs in New York State which prepare 44% of the professional nursing graduates in the state.[4]

In order to qualify and work as a Registered Professional Nurse, it is necessary for the Associate Degree Nursing student to (1) complete the requirements for the Associate Degree established by the nursing faculty and the college and (2) pass the New York State Registered Nurse Licensing exam which is the State Board Test Pool Examination (SBTPE). This exam is designed to insure a minimum level of competency and protect the safety of the public. From 1968-1973 the percentage of ADN graduates who have passed

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[3] Mildred L. Montag, Community College Education for Nursing. New York: McGraw-Hill Book Company, Inc., 1959, p. 370.

[4] Educational Preparation for Practical and Professional Nursing in the State of New York 1972, The University of the State of New York, The State Education Department, Office of Professional Education, Nursing Education, 1973, p. 11.

the licensing exam on the first try has fluctuated between 59 and 62 percent. In other words, four out of every ten students completed their formal preparation for nursing and then did not qualify for licensure as registered nurses on their first examination.[5]

When these New York State data are compared with national statistics, a second concern is raised. Associate Degree graduates for the county as a whole exhibited a higher passing rate on the licensing exam than ADN graduates in New York State. The national passing rate was 10% greater than the New York State rate in 1967-68 and 16% greater in 1971-72.[6]

Both the Board of Regents and the Nursing Education Unit, State Education Department, expressed concern about these comparisons. A proposal was written cooperatively by the Cornell Institute for Research and Development in Occupational Education and the Nursing Education Unit to study the factors affecting the performance of Associate Degree Nursing graduates on the licensing examination.

Purpose

The statistics which generated this project may be summarized as follows:

(1) The passing rate for licensure of New York State ADN graduates is less than the national ADN passing rate and the difference appears to be increasing.

(2) The passing rate for licensure of New York State ADN graduates is less than the passing rate of graduates of hospital and baccalaureate programs within the state.

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[5] Ibid., p. 13.

[6] Ibid., p. 14.

The decision was made to limit the project to an examination of New York State Associate Degree Nursing programs. There would be no comparisons made with other types of programs within New York State or to ADN programs in other states.

The purpose of the project then became the identification of those characteristics of Associate Degree Nursing programs in New York State which relate to the achievement of their graduates on the State Board Test Pool Examination. These validated criteria would be used in the development of an inventory to assist the Associate Degree Nursing programs in self-evaluation and possible improvement of the licensure rates of ADN students.

II. PROCEDURES

Sample Designation

There are 40 Associate Degree Nursing programs in New York State; this project included the 35 programs which had graduated at least three classes by 1973. Information available from the Nursing Education Unit was obtained for all programs. A questionnaire mailed to all 35 schools was returned by 32 of the program administrators.

Because some program and student characteristics could not be examined adequately through a search of existing records or a mailed questionnaire, the decision was made to do an in-depth study of programs selected from the following four categories:

(1) Programs which has consistently ranked in the top third in percent of first time candidates to pass the licensing examination during the four academic years between 1970-73.

(2) Programs which were consistently improving in passing rate.

(3) Programs which were consistently declining in passing rate.

(4) Programs which had consistently ranked in the bottom third in percent of first time candidates to pass the licensing examination from 1970-73.

When the licensing examination scores were examined in this manner, there were no programs which has been consistently declining in passing rate. Twelve ADN programs could be classified into the other three categories. Random sampling seemed inappropriate for such a small number; therefore, eight schools were selected which best represented a geographical distribution

across the state. The resulting sample of schools used for program visitations was three from the top third, two from the improving category, and three from the bottom third.

Instrument Development

A review of related literature in nursing education and program evaluation was used to identify factors which might be related to success on the licensing exam and/or quality of the program. Personnel in the Nursing Education Unit of the State Education Department identified additional factors based upon their experiences with Associate Degree Nursing programs.

Nursing Education Unit records were available as a preliminary source of information about all nursing programs in New York State. Scores on the State Board Test Pool Examination for each ADN program were available from these records as well as several other types of comparable information (Appendix A).

Since some data are collected only at the time of program registration, a questionnaire was designed to solicit information directly from each ADN program about selected aspects of the nursing program (Appendix B). A preliminary draft was reviewed, piloted at two schools, discussed with the Advisory Council, and modified.

Many of the factors which had been originally identified as having a possible relationship to success on the licensing exam were too subjective for use in a mailed questionnaire. These factors were grouped under various headings for use in an interview schedule during site visits (Appendix C). A preliminary draft was reviewed, piloted in one school, and modified.

Extensive research has been done in the prediction of State Board Test Pool Exam scores from student characteristics but results have been inconsistent. Those variables which had been found to be most successful in

predicting licensing examination scores were selected for use in this study. Additional characteristics were suggested by members of the Advisory Council making a total of 16 variables selected for study (Appendix D). The preliminary dratt was piloted in one school before modifications for final use. These four data-gathering instruments were used to obtain all the information contained in this report.

Data Collection

Program Survey

The program questionnaire was mailed in January, 1974, to all two-year colleges in the state offering the Associate Degree in Nursing. Follow-up postcards and telephone calls resulted in a return of 32 questionnaires or a 91 percent rate of return.

The criterion variable for the analysis was the percent of first time candidates from the school who passed the licensing examination between 1970-73 with the four years averaged. On this basis the schools were sorted into three categories which will be referred to as top third, middle third, and bottom third.

Most of the questionnaire data could be quantified and were analyzed using t-tests of differences between means of the top and bottom groups. Data which were not quantifiable and/or based on ordinal scale were compared informally by describing programs in the three groups (Appendix E).

A stepwise multiple regression analysis was also attempted as a statistical method of linking each item to the success rate of that specific program. Although several significant F ratios emerged, the relationship of these items was clearly not linear and standard error coefficients were high. Thus this analysis is not reported as results would be misleading.

Program Visits

Eight Associate Degree Nursing programs were visited between January and March, 1974. The visiting team consisted of three persons: a senior staff member from the Nursing Education Unit, State Education Department; a consultant in nursing education from outside the state; and the project researcher. The staff member and project researcher visited all eight schools; there were two consultants and each made four visits. Site visits were scheduled in advance and were each one full day in length. During the visits the project team talked with the chairperson, faculty, and a student group. Interviews were informal with an attempt to "look backward" at the program available for the 1973 graduates. At the end of each visit, the project team jointly summarized what had been seen and heard under each of the items of the interview schedule.

The criterion of "percent of first time candidates passing the licensing examination from 1970-73" had been used to select the eight schools for site visits. The sample included three schools in the top third during that period of time, two schools which had been consistently improving, and three schools from the bottom third.

In late March the project researcher met with the two consultants to review these program summaries and compare the eight programs on each item of the interview schedule. The basic purpose was to select those characteristics which appeared to vary between programs with high or low rate of passing on the licensing examination. Comparisons fell into three patterns:

(1) Programs in the two categories did not differ to any appreciable amount on the selected factor, or

(2) Programs in the two categories differed on the selected factor but

there was no clear pattern in the variation, or

(3) Programs in the top third differed appreciably from the bottom third as to amount, kind, quality, etc., of the factor present in that program.

The findings include only those factors or characteristics which were found to clearly discriminate between top third and bottom third schools as described in pattern 3 above.

The site visitation team used the data from the two improving schools to verify each factor further by asking the following questions: (1) When this program was described as it was four years ago, did it exhibit the characteristic most like schools in the bottom third? (2) Does this program at present exhibit the characteristic similar to schools in the top third? When inconsistencies were found, those factors were also deleted from the findings.

Student Survey

Student data were obtained on the 1973 graduates of each of the eight programs which were visited. Data were collected from both college and nursing department records. A project research assistant visited six of the schools to gather information directly from their records. Two schools provided the available information by hand compilation and/or printout.

Data on 777 ADN students were obtained. It was not possible to obtain information on all variables for each student in each school. The variable for which there was the least data was the New York State Regents Scholarship Exam score (RSE). Only one school required the exam results for admission. The NLN Achievement Test scores were also incomplete. One school did not use the exam at all and at two schools it was optional. Background information about the students, such as marital status, health

training and work experience, was not always available. Even though there was missing data on certain variables, the total number for each variable was large enough to allow confidence in the findings.

The main statistics employed were Chi square and t-tests. These were used to determine the significance of differences between students who passed and failed the licensing exam with respect to each independent variable. For descriptive purposes, data were summarized for students who had attended programs categorized as top third, improving, and bottom third (Appendix G).

Limitations of the Study

Since a random sample was not considered appropriate for this project, caution should be exercised in generalizing the findings to all Associate Degree Nursing programs. Nevertheless, the eight institutions visited represented a fair cross-section of community colleges in New York State. In addition, some data were collected from all ADN programs which had graduated more than three classes.

The study was primarily descriptive in nature. Data were collected from mailed questionnaires to each program and through personal interviews during the eight site visits. The results reported here are accurate only to the extent that responses made in these situations were accurate.

The reader should keep in mind that for this study the sole criterion for success was the passing rate on the licensing exam of first-time candidates from each program. The project staff was aware of controversy about the exam and support continuing dialogue regarding revisions of the licensing examination. Nevertheless, two important points should be emphasized. First, the SBTPE is an examination used by all states and jurisdictions. It has been useful in facilitating inter-state movement of nurses, and providing a minimal level of public protection. Second, a

a nursing graduate cannot use the title of "Registered Professional Nurse" until she/he has passed this licensing examination.

While comparisons were made on all variables, there was no attempt to establish causality. This study should be viewed as a first step in developing a data base which hopefully will lead to more precise techniques for Associate Degree Nursing program evaluation.

III. PRESENTATION AND INTERPRETATION OF THE FINDINGS

Data from this project have been grouped into three categories for reporting purposes:

(1) Program Survey information, obtained from Nursing Education Unit records and the 32 ADN programs which responded to the mailed questionnaire,

(2) Program Visits information, obtained from site visits to eight colleges, and

(3) Student Survey information, obtained from college and nursing departmental records for the 1973 graduates of eight colleges.

Program Survey

The program survey included the 35 Associate Degree Nursing programs which had graduated at least three classes by 1974. Survey information from the Nursing Education Unit records was available for all programs. The mailed questionnaires were returned by 32 schools, or a 91 percent rate of return. The characteristics examined are listed in Appendices A and B.

The criterion variable (percent of first time candidates from the school who passed the licensing examination between 1970-73 with the four years averaged) was used to divide the schools into three groups: top third, middle third, and bottom third. Those survey items which had numerical responses were coded and tabulated.

Means and standard deviations (SD) on continuous variables for the top and bottom group are shown in Table 1. Univariate tests of significance

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TABLE 1

ANALYSIS OF DATA RELATING SELECTED PROGRAM VARIABLES TO SBTPE RESULTS

VARIABLES	TOP THIRD		BOTTOM THIRD		T VALUE	SIGNIFICANCE
	MEAN	SD	MEAN	SD		
ADMINISTRATION						
Age of program	9.0	4.98	9.0	2.64	0.0	ns
ADN student enrollment in 1972	184.8	74.15	429.2	267.97	2.92	$p < .01$
College enrollment/ ADN enrollment in 1972	8.9	11.36	6.3	3.97	.72	ns
Number of other health-related programs in the college	3.0	2.49	2.5	2.11	.46	ns
Number of chairpersons in past four years	1.6	.64	1.6	.88	.15	ns
Percent of time chairperson spends on departmental administration	48.8%	18.30	59.0%	17.83	1.31	ns
Average ADN student attrition from 1970-73	41.8	10.99	42.4	10.59	.14	ns
Percent of applications accepted for admissions to the college	74.6%	16.13	67.9%	24.73	.70	ns
Percent of applications accepted for admissions to the ADN program	49.5%	21.75	41.4%	21.96	.78	ns
Average number of criteria for admission to ADN program	2.4	.66	1.9	.99	1.43	ns
Student enrollment expansion ratio comparing 1969 with 1972	1/1.2	.60	1/2.2	1.52	1.88	$p < .05$

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TABLE 1 - Continued

VARIABLES	TOP THIRD		BOTTOM THIRD		T VALUE	SIGNIFICANCE
	MEAN	SD	MEAN	SD		
FACULTY						
Average yearly percent of new faculty (turnover plus positions) from 1969-72	26.3%	8.56	28.3%	30.00	.19	ns
Average yearly percent of faculty turnover from 1969-73	13.3%	8.85	9.7%	7.64	.90	ns
Faculty/student ratio for 1st year student in nursing courses taught in the:						
classroom	1/69	26.18	1/53	31.91	1.23	ns
campus lab	1/12	5.89	1/15	6.46	1.25	ns
clinical lab	1/10	2.09	1/12	3.41	1.04	ns
Faculty/student ratio for 2nd year students in nursing courses taught in the:						
classroom	1/48	12.77	1/46	21.51	.19	ns
clinical lab	1/11	1.73	1/11	2.03	.12	ns
Percent of faculty full time	74.3%	21.52	81.3%	15.68	.80	ns
Percent of faculty with Masters degree or more	58.1%	19.72	84.4%	20.61	2.92	$p < .01$
Percent of faculty with some formal preparation for teaching	62.1%	17.93	73.7%	23.51	1.22	ns
Percent of faculty with formal continuing education experiences in the past three years	88.4%	17.20	85.7%	22.02	.30	ns
CURRICULUM						
Total number of credit hours required:						
in nursing courses	32.6	1.23	33.0	1.67	.96	ns
for the ADN degree	66.1	2.84	64.9	2.66	.94	ns

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TABLE 1 - Continued

VARIABLES	TOP THIRD		BOTTOM THIRD		T VALUE	SIGNIFI-NANCE
	MEAN	SD	MEAN	SD		
Distribution of nursing courses clock hours in:						
classroom	298.2	25.16	265.5	34.75	2.36	$p < .05$
campus lab	54.2	38.27	35.3	34.28	1.13	ns
clinical lab	505.6	62.81	527.5	48.59	.85	ns
TOTAL	858.8	71.91	831.8	65.64	.85	ns
Average number of clock hours per credit hour in nursing courses	26.9	2.77	26.1	2.33	.63	ns

were computed and resulted in significant differences on four of the variables.

Two of these significant differences are related and should be interpreted in terms of that relationship. High achieving programs had a smaller student enrollment (185) than did low achieving programs (429). High achieving programs had a slower expansion rate (1 to 1.2 student over four years) when compared with low achieving programs (1 to 2.2 in four years). Since all high enrollment programs also had high expansion rates, there was no statistical method available to discover which variable is more closely related to achievement.

High achieving programs reported a lower percent of faculty holding the Masters degree or more (58%) than did low achieving programs (84%). This may be seen as a surprising finding but it has a geographical bias. When only upstate schools are compared, the gap was considerably smaller (58% to 66%) and not statistically significant.

Students in high achieving programs spend more hours in classroom

instruction (298) than do those in low achieving programs (266). It is often assumed that increased theory-oriented instruction would be related to higher scores on a theory-oriented examination.

The variables which were not continuous are summarized in Appendix E. The frequency distribution and percentages given should permit informal comparisons for all three groups.

Financial data was requested from each college. This section was omitted by many persons completing the questionnaire. Wide variations and inconsistencies in the data reported make accurate conclusions difficult.

Program Visits

Visits were made to eight ADN programs. The visiting team summarized what had been seen and heard on each of the interview schedule items. The programs in the top third were then compared with programs in the bottom third. Table 2 contains those specific characteristics found to exist to a greater degree in the high achiever programs (those schools whose SBTPE scores were consistently in the top third during the past four years).

There is a tendency among researchers to give less emphasis to findings which are not quantifiable. This would be a serious error if applied to this particular project. The reliability and validity of the findings were a constant concern of the members of the visitation team. Only those items for which there was unanimous agreement among team members are included in the findings.

The Program Evaluation Inventory integrates findings from the questionnaires and the visits. In a few instances, data from one source is supportive of data from the other. In most cases, the questionnaire and the interview schedule dealt with different variables and were not comparable.

TABLE 2

CHARACTERISTICS OF HIGH ACHIEVER SCHOOLS

Organization and Administration

1. Stable departmental administration was evidenced by the fact that each program had a maximum of two chairpersons since the program's inception six to ten years ago.

2. Chairpersons stated that enrollment expansion had been gradual and/or leveled off. This expansion had been accompanied by proportionate increases in faculty and services.

3. Site visitors talked with chairperson, faculty, and students concluding that each chairperson exhibited the following traits:
   - Clear personal interpretation of the purpose of the ADN program.
   - Good working relationship with college administration.
   - Investigation-oriented; constant use of small studies to feed information into program, e.g. on-the-job success of graduates, effect of tutoring on student performance.
   - Ability to provide leadership and direction for faculty.
   - Leadership style uniquely fitted into the department; chairperson may have drawn from a repertory of administrative and leadership styles to adapt to the particular situation.

Faculty

4. Site visitors talked with chairperson, faculty and students, concluding that faculty exhibited the following characteristics:
   - Expert clinicians (as stated by students and chairperson).
   - Vigor, vitality, and enthusiasm (as noted by site visitors).
   - Commitment to teaching (one example being scheduling of classroom and clinical experiences to benefit students, not just faculty convenience).

TABLE 2 - Continued

- Clear, unified understanding of the purpose and philosophy of ADN education (apparently a result of a stable core faculty and of on-going clarification of the philosophy in order to provide a sense of direction to planning).

Students

5. College and nursing department policies included screening students academically in order to be highly selective for admission to the nursing program and/or for advancement from one nursing course to the next. A "C" was the minimum acceptable grade for progression in nursing courses.

6. Students were perceived by visitors as having the following characteristics:
   - High morale.
   - Ability to cope with a difficult and strenuous curriculum (may be a result of high morale).
   - General attitude of confidence and less apprehension about passing SBTPE.
   - Willing and eager to take responsibility for own learning.

7. There appeared to be fewer students employed and especially fewer students employed full-time but no hard data were available to support this statement.

Curriculum and Instruction

8. Chairperson, faculty, and students had a clear understanding of the goals and objectives of the program. Course and daily objectives were clearly stated in writing, had been communicated to students, and most were in measurable terms.

9. Curriculum was organized:
   - Around clinical content areas.

TABLE 2 - Continued

- With a clear mechanism for coordination among instructors within and between nursing courses.
- With a clear mechanism for coordination of classroom and clinical instruction.
- To enable students to take non-nursing courses in a sequence which fitted in with nursing courses.

10. Classroom and clinical experiences were scheduled with apparent concern for students, i.e. travel arrangements, previous health occupation preparation, and experiences needed.

11. A general climate for innovation was evidenced by the presence of:
    - Better developed and more abundant teaching materials and media.
    - Ready access by students to these materials.
    - The use of these materials both as a part of and supplementary to regular classroom instruction.
    - A high proportion of materials developed by the faculty and more being developed.
    - More opportunities for students to be responsible for their own learning.

Resources, Equipment, and Facilities

12. Nursing laboratories (skills, audio-visual, independent learning) were:
    - Well equipped.
    - Open for long hours.
    - Staffed with faculty, laboratory technician, or trained student worker to assist the nursing students.

13. College and nursing departments were located in very appealing physical surroundings; classrooms and laboratories were spacious and attractive.

TABLE 2 - Continued

Educational Outcomes

14. Primary emphasis in curriculum revision was placed on:
    - Clarifying goal and objectives.
    - Reviewing and questioning existing practices in terms of how the program could best enhance student learning.

15. Follow-up studies of graduates conducted by chairperson or a designated faculty member were used in planning curriculum revisions.

16. Evaluation of student achievement was well planned and implemented, as evidenced by:
    - Type and frequency of evaluations of both classroom and clinical performance.
    - Departmental cooperation in establishing standards and developing test items.
    - Use of test grids and item analysis.

17. Review techniques were incorporated into the program, i.e. faculty might use several class sessions at the end of the semester for questions and summarization of that course.

18. Chairperson and faculty had provided the opportunity for students to practice handling certain types of test items similar to those used on the licensing exam. Each program used at least two of the following techniques:
    - Administered the NLN achievement examination.
    - Participated in taking proficiency and external degree examinations for question validation.
    - Developed objective, situation-type test items for course examinations.

Student Survey

Data on 777 students from eight schools were obtained as a result of this survey. Chi square and T-tests statistics were used to determine the

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significance of difference between students who passed and failed the licensing examination with respect to each independent variable. T-tests were used as opposed to Chi square when the data were continuous. Certain variables of ordinal data were broken down into discrete categories (age and semesters of high school math and science), but overall GPA and RSE scores were thought to be more illuminating in a continuous form.

Table 3 presents the results of the t-tests. Differences between the means of SBTPE passing and failing students for the New York State Regents Scholarship score (RSE) and the overall Grade Point Average for each semester proved to be significant. Since only one school provided complete data for the RSE, this result cannot be generalized to all programs. It does have promise, however, as a possible predictor of SBTPE results.

TABLE 3

T-TESTS FOR DIFFERENCES BETWEEN GPA AND RSE SCORES ACCORDING TO SUCCESS ON THE SBTPE

VARIABLE	MEAN		T-VALUE	SIGNIFICANCE
	PASS SBTPE	FAIL SBTPE		
GPA Semester 1	2.82	2.18	10.53	$p < .005$
GPA Semester 2	2.78	2.15	10.54	$p < .005$
GPA Semester 3	2.72	2.13	10.29	$p < .005$
GPA Semester 4	2.96	2.29	11.42	$p < .005$
RSE	135.38	101.04	4.3	$p < .05$

Significant Chi square values were obtained for the following variables: marital status, rank in high school class, change in nursing grade from first to second semester, and the actual letter grade in nursing for the first year. The results of these tests are summarized in Table 4.

Since Chi square testing provides only an overall measure of significance for any table partitioned into more than two subtests (that is 2 x 3 tables and greater), the variables found to be highly related to passing and failing were examined further. Multiple 2 x 2 Chi squares were performed in order to determine which categories accounted for the differences that were found. When 2 x 2 comparisons were made among the three categories for marital status, it was found that only the difference in the proportions of married students versus single students passing the SBPTE was significant. Chi square values for married or single students versus the category for divorced/separated were not significantly different.

Multiple 2 x 2 Chi squares were also carried out for rank in high school. Students who ranked in the first quartile of their high school classes versus both the third and fourth quartiles passed the licensing exam in greater proportions.

When grade in nursing was examined, the greatest difference in proportion was found between students whose GPA in nursing decreased from first to second semester as opposed to those whose grade remained the same. The difference between increasing and decreasing grades was not significant. This result is somewhat misleading because the categories used were broad. The student earning an "A" in first semester nursing could only be categorized as "decreased" or "stayed the same" for the second semester. Thus among all schools it seemed to be a characteristic of SBPTE passing students that their grades remained constantly high.

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TABLE 4

CHI SQUARE VALUES FOR RELATIONSHIP BETWEEN
PERFORMANCE ON SBPTE AND BIOGRAPHICAL VARIABLES

VARIABLE	PASS SBPTE		FAIL SBPTE		CHI SQUARE	SIGNIFICANCE
	N	%	N	%		
Sex						
Female	519	70.4%	218	29.6%	.30	ns
Male	26	65.0%	14	35.0%		
Marital Status						
Single	212	72.4%	81	27.6%	14.52	$p < .001$
Married	230	89.9%	41	15.1%		
Divorced/Sep.	17	89.5%	2	10.5%		
Age						
17-20	173	66.5%	87	44.6%	7.17	ns
21-25	100	75.2%	33	24.8%		
26-35	123	74.5%	42	25.5%		
over 35	113	77.4%	33	22.6%		
Rank in H.S. Class						
1st Quartile	79	95.2%	4	4.8%	24.65	$p < .001$
2nd Quartile	75	82.4%	16	17.6%		
3rd Quartile	61	69.3%	27	30.7%		
4th Quartile	27	64.3%	15	35.7%		
Semesters of H.S. Math						
0-2	65	72.2%	25	27.8%	1.63	ns
3-5	114	76.0%	36	24.0%		
6-7	125	78.1%	35	21.9%		
8-10	34	81.0%	8	19.0%		
Semesters of H.S. Science						
0-2	51	78.5%	14	21.5%	1.04	ns
3-5	117	74.1%	41	25.9%		
6-7	136	76.8%	41	23.2%		
8-10	33	80.5%	8	19.5%		
Grade in Nursing from 1st to 2nd Semester						
Increase	100	72.5%	38	27.5%	18.82	$p < .001$
Degrease	119	60.4%	78	39.6%		
Stays Same	273	77.8%	78	22.2%		

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TABLE 4 - Continued

VARIABLE	PASS SBPTE		FAIL SBPTE		CHI SQUARE	SIGNIFICANCE
	N	%	N	%		
College Overall GPA From 1st to 2nd Semester						
Increase	167	78.4%	46	21.6%	2.37	ns
Decrease	206	76.9%	62	23.1%		
Stays Same	72	84.7%	13	15.3%		
Previous Training in Health						
None	224	74.9%	75	25.1%	6.24	ns
LPN	70	78.7%	19	21.3%		
Hospital	18	90.0%	2	10.0%		
ADN	6	85.7%	1	14.3%		
BS	10	100.0%	0	0.0%		
Health Tech.	9	81.8%	2	18.2%		
Previous Work in Health Field						
None	170	73.6%	61	26.4%	5.41	ns
Aide	74	84.1%	14	15.9%		
LPN	67	78.8%	18	21.2%		
Technician	14	82.4%	3	17.6%		
Corpsmen-Orderly	8	72.2%	3	27.8%		
Grade in Nursing First Year						
A	38	92.7%	3	7.3%	88.33	$p < .001$
B+	55	88.7%	7	11.3%		
B	167	86.5%	26	13.5%		
C+	117	72.2%	45	27.8%		
C	87	55.8%	69	44.2%		
D+	34	44.7%	42	55.3%		
D	2	40.0%	3	60.0%		

Actual letter grade received in nursing averaged for the first two semesters had a strong relationship with SBPTE results. Figure 1 provides a graphic illustration of the linear relationship which exists between nursing grade and passing rate. As the student's grade increases, so does the chance of passing the licensing exam. The relationship between this finding and program quality will be discussed in the following section.

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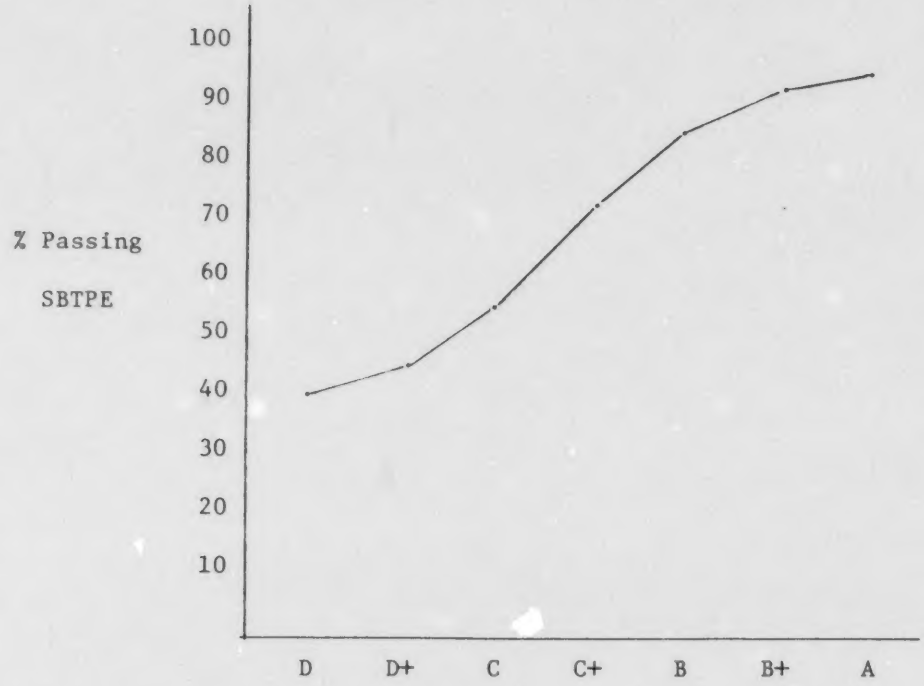

Fig. 1 -- Percent of Students Passing the SBPTE for Each of Seven Categories of Nursing Grades.

The student data represented all 1973 graduates from three groups of schools: top third, bottom third, and improving on SBTPE scores. Comparisons of student characteristics among the three categories of schools were compiled and are presented in Appendix G.

Interaction of Program and Student Variables

This study was designed to look at program and student characteristics related to the passing rate on the licensing exam. Examination of interaction between these two sets of variables must be descriptive since student data from only eight programs are involved.

Highly significant differences among SBPTE scores were obtained, but this was the basis upon which the assignment to strata was made and is therefore predictable. These scores are presented in Table 5. The

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important differences are found by examining the standard deviations for the five SBTPE scores. The standard deviation summarizes how different the various cases are from each other. The smaller the standard deviation, the more that pairs of students tend to be alike. Scores from top schools had a lower standard deviation for all parts of the exam. It is therefore possible to conclude that there is greater homogenity in terms of SBTPE scores among students in the top third schools than students in the bottom third i.e. the student populations from these two groups of schools are different on this variable.

TABLE 5

MEANS AND STANDARD DEVIATIONS FOR SBTPE RESULTS FOR TWO GROUPS

	TOP THIRD		BOTTOM THIRD	
SBTPE	MEAN	SD	MEAN	SD
Medical	516.47	88.24	392.22	121.37
Surgical	524.24	88.52	382.72	121.48
Obstetrics	536.01	93.31	404.07	110.24
Pediatrics	513.24	98.72	413.92	115.23
Psychiatric	541.95	91.35	428.74	114.57

Another interesting comparison is rank in high school, presented in Table 6. This information was available for 304 of the 777 students (with students from the improving group omitted for this analysis). The top group obtained 30% of their students from the third and fourth quartiles of their high school class while the bottom group obtained 58% from the same quartiles. The student populations are obviously different on this variable. When the percent passing the SBTPE is examined, another type of

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comparison is possible. Of those students in the third and fourth quartiles from the top schools, 89% and 88% respectively passed the SBTPE. Of the students in the third and fourth quartiles from the bottom schools, only 56% and 8% respectively passed the SBTPE. It would appear, therefore, that students with similar high school ranks have very different chances of succeeding on the SBTPE according to the program in which they are enrolled.

TABLE 6

RELATIONSHIP BETWEEN RANK IN HIGH SCHOOL GRADUATING CLASS AND SUCCESS ON THE SBTPE FOR TWO GROUPS

RANK IN HIGH SCHOOL	TOP THIRD			BOTTOM THIRD		
	N	% of Total	% Passing SBTPE	N	% of Total	% Passing SBTPE
1st Quartile	52	35.9	96.2	13	16.2	84.6
2nd Quartile	48	33.1	87.5	21	26.3	66.7
3rd Quartile	28	19.3	89.3	34	42.5	55.9
4th Quartile	17	11.7	88.2	12	15.0	8.3
TOTAL	145	100.0		80	100.0	

Particularly indicative of the interaction between program and student characteristics was the breakdown of actual grade received the first year in nursing. In the top third schools, 52% of the students received grades of B or better. A similar percent (47%) of B or better grade was received by students in the bottom third schools. However, the difference in passing rate on SBTPE for these same students is quite large i.e. 99% to 75%, respectively. The standards used in assigning grades seem to account for some of the program variance.

The exact effect of the interaction between program and student characteristics on the SBTPE passing rate is still unknown. The findings from this study can be used to strongly suggest that neither modifications in programs nor in student body composition alone is the total answer to improving SBTPE results.

IV. CONCLUSIONS AND RECOMMENDATIONS

The purpose of the project was the identification of those characteristics of Associate Degree Nursing programs in New York State which relate to the achievement of their graduates on the State Board Test Pool Examination. These validated criteria were used in the development of the Program Evaluation Inventory which appears as the third part of this report.

Conclusions

This section presents conclusions which were drawn from project findings. Conclusions will be discussed according to program characteristics, student characteristics, program-student interaction, and summary conclusions.

Program Characteristics

The Program Evaluation Inventory contains complete descriptions of those characteristics found to exist to a greater degree in the high achiever programs than in the low achiever programs. The following variables were found to be related to achievement on the SBTPE: size and expansion rate of program; characteristics and tenure of chairperson; characteristics and tenure of faculty; characteristics and selection of students; objectives and organization of the curriculum; climate for learning; distribution of nursing education hours; resources, equipment, and facilities; curriculum revisions; evaluation of student achievement; and type of preparation for the licensing examination.

Student Characteristics

From an examination of student data, the following variables appear to be useful in admitting students into the program who have greater probability of passing the SBTPE: Regents Scholarship Exam score of 135 or better;

first quartile of high school graduating class, and married. The following variables appear useful in retaining students who have greater probability of passing the SBTPE: overall grade point average of 2.8 or better in the first year, nursing grades of C+ or better in the first year, and consistent or improving nursing grades during the first year.

Program-Student Interaction

Since specific admission practices of two-year colleges vary greatly, it is reasonable to assume that student groups in different colleges might also vary. Assuming that both program and student characteristics might be influencing the passing rate on the licensing examination, data was examined combining both type of characteristics. Some evidences of program-student interaction were:

(1) Student performance on the SBTPE varied less in high achiever schools than in low achiever schools.

(2) High achiever schools enrolled fewer students who ranked in the bottom half of their graduating class but were nevertheless extremely successful in dealing with these students; 89% passed in licensing exam versus 43% of the same level student enrolled in low achiever schools.

(3) Both high and low achiever schools had similar percentages of students with grades of B or above in first year nursing courses but more students from high achiever schools with these grades passed the licensing exam than did students from low achiever schools (99% to 75%, respectively).

Obviously the issue of program-student interaction has not been fully resolved. It is presented here to demonstrate that both program and student characteristics appear to influence the licensing examination passing rates.

Summary Conclusions

In this project the use of SBTPE scores was viewed as a useful but limited measure of a program's success in preparing qualified nurses. The SBTPE measures only certain aspects of a student's competencies and is not designed to test program effectiveness. It is significant to note that chairpersons and faculty members reported few inconsistencies between efforts "to be successful on the State Board Test Pool Exam" and efforts "to be successful in providing effective nursing education". Stated in other terms, programs doing well on the licensing exam were also making noteworthy attempts at providing quality nursing education.

Project findings lend strong support to concluding that the passing rate on the SBTPE can be improved if a school gives primary emphasis to selecting highly academically qualified students and providing a strenuous, selective program for them. Nevertheless, findings also indicate that nursing programs providing quality education are capable of maintaining high passing rates while admitting less academically qualified students.

Increasing the passing rate for a program thus presents a genuine dilemma. The fastest and perhaps most effective method appears to be academic selectivity before and during the program. On the other hand, if a school is committed to open admission and full opportunity policies, primary emphasis must then be given to remediation activities and to the improvement of the instructional processes of nursing education. Little immediate effect upon the passing rate is likely. Each program must make a decision concerning student selectivity after consideration of college policy and ethical issues of fairness to students.

Recommendations for Dissemination

From names submitted by the New York State ADN Council, a project Advisory Council was selected which included three chairpersons and three faculty members from ADN programs in the state. In May, 1974, the Advisory Council met to review this report and suggest appropriate follow-up and dissemination activities. The following recommendations are suggestions from the meeting:

1. The report should be referred to three groups for study and appropriate follow-up activities:
   - . NYS Associate Degree Nursing Council
   - . NYS Associate Degree Nursing Faculty Organization
   - . Nursing Education Unit, Division of Professional Education, State Education Department
2. Department chairpersons should discuss report findings with the appropriate administrative officer in each college.
3. An abstract of the report might be distributed to all nursing services units used as clinical agencies by ADN programs and to other types of nursing programs in NYS.
4. Each school is urged to use the Program Evaluation Inventory on a continuing basis. Recommendations for revisions should be made to the Nursing Education Unit, State Education Department.
5. The Nursing Education Unit is urged to use this report and subsequent feedback as part of a rational expansion of the data base on ADN programs. The report also has implications for review of criteria for program certification and recertification.

Recommendations for Further Study

1. Use of the NLN achievement tests deserves additional study. Although not reported in the main findings, scores were collected from all schools which used the NLN test. All individual correlations between relevant sections of the NLN and SBTPE proved statistically significant and are reported in Appendix H. The coefficients for the NLN tests in obstetrics, pediatrics, and psychiatry are sufficiently large to indicate the usefulness of these exams for predictive purposes.
2. This project was a first step in developing a data base which hopefully will lead to more precise techniques for ADN program evaluation. Future studies should be expanded to include an evaluation of on-the-job performance of graduates of ADN programs.

PROGRAM

EVALUATION

INVENTORY

DIRECTIONS FOR USE

The Inventory is designed for use by nursing departments in self appraisal. Information used in developing the inventory items was obtained from three sources: program questionnaires, site visitation interviews, and State Education Department records. The items are grouped into six areas: Administration and Organization; Faculty; Students; Curriculum and Instruction; Resources; Equipment, and Facilities; and Educational Outcomes. Each item includes two parts: (1) a description of the characteristics found to exist to a greater degree in the programs whose graduates had a high success rate on the licensing examination and (2) suggested questions to be used for self evaluation.

Each item of the Inventory should be used when conducting the self appraisal. Other items may be added if a more comprehensive program evaluation is desired. The information needed to complete the Inventory could be collected either by the entire faculty or by a team from within the faculty. The entire faculty should be involved in the decision making process to determine the steps to take as a result of the self appraisal.

The items in the Inventory are the characteristics found to exist to a greater degree in the high-achiever programs than in the low achiever programs. Discrepancies on any item between the program being appraised and the item description in the Inventory should be examined carefully. The fact that an item was a characteristic of high achiever programs in this study does not guarantee that its implementation will have an effect upon SBTPE results. Before changes are implemented, each faculty group should also consider local objectives, concerns, and problems.

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AREA 1: ORGANIZATION AND ADMINISTRATION

1.1 SIZE OF PROGRAM

DESCRIPTION

Questionnaire data indicated a significant statistical relationship between size of nursing student enrollment and high achievement. The optimum size of program enrollment appears to be between 102 and 278 as shown by the following table:

Number of Students Enrolled	Achievement of Graduates on SBTPE		
	Top Third	Middle Third	Bottom Third
Range	102-278	70-760	102-1109
Average	185	239	429

QUESTION

How many students are currently enrolled in the nursing program?

1.2 EXPANSION OF PROGRAM

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DESCRIPTION

Chairpersons of high achiever programs visited stated that enrollment expansion had been gradual and/or had leveled off. This expansion has been accompanied by proportionate increases in faculty and services.

Questionnaire data indicated a significant statistical relationship between program expansion in the past four years and high achievement. Enrollment changes between 1969 and 1973 were computed and the percent of programs in each category are:

Enrollment Changes	Achievement of Graduates on SBTPE	
	TOP THIRD	BOTTOM THIRD
Decrease in size	8%	9%
Slight increase	67%	27%
Doubled in size	25%	37%
Tripled or more in size	-	27%

QUESTION

Compare the number of nursing students in the current school year with the number of students four years ago. What is the percent of enrollment change? What changes have occurred in the number of faculty and supporting services?

1.3 CHARACTERISTICS OF THE CHAIRPERSON

DESCRIPTION

Site visitors talked with chairpersons, faculty, and students concluding that each chairperson of a high achiever program exhibited the following traits:

- Clear personal interpretation of the purpose of the ADN program.
- Good working relationship with college administration.
- Open and compatible relationships with nursing faculty.
- Investigation-oriented; constant use of small studies to feed information into program, e.g. on-the-job success of graduates, effect of tutoring on student performance.
- Ability to provide leadership and direction for faculty.
- Leadership style uniquely fitted to the department; chairperson may have drawn from a repertory of administrative and leadership styles to adapt to the particular situation.

QUESTION

Describe the characteristics of the chairperson.

1.4 STABILITY OF DEPARTMENTAL ADMINISTRATION

DESCRIPTION

Stable departmental administration was evidenced by the fact that each program visited had a maximum of two chairpersons since the program's inception six to ten years ago.

QUESTION

How many chairpersons has the program had since its inception? What has been the length of service for each chairperson? Why did each chairperson leave the position?

AREA 2: FACULTY

2.1 CHARACTERISTICS

DESCRIPTION

Site visitors talked with chairpersons, faculty and students, concluding that faculty in high achiever programs exhibited the following characteristics:

- Expert clinicians (as stated by students and chairperson).
- Vigor, vitality, and enthusiasm (as noted by site visitors).
- Commitment to teaching (one example being scheduling of classroom and clinical experiences to benefit students, not just for faculty convenience).
- Good interpersonal relations and high morale among faculty (as characterized by a lack of factions, a sense of cohesiveness, supportiveness toward individuals and the group, and a willingness to disagree on issues while respecting the judgment of others).
- Clear, unified understanding of the purpose and philosophy of ADN education (apparently a result of a stable core faculty and of on-going clarification of the philosophy in order to provide a sense of direction to planning).

QUESTION

Describe the characteristics of the faculty.

2.2 STABILITY

DESCRIPTION

Chairpersons as well as faculty described themselves to visitors as having a stable, core faculty. Questionnaire data was used to compute a faculty stability index (number of new positions plus number of turnover divided by number of total faculty). There was a tendency for high achiever programs to have a more stable faculty but the difference was not statistically significant.

QUESTION

What percent of the total nursing faculty was new during the past four years (new positions plus turnover)? What were the reasons for faculty turnover?

AREA 3: STUDENTS

3.1 CHARACTERISTICS

DESCRIPTION

Students in high achiever programs were perceived by visitors as having the following characteristics:

- . High morale.
- . Ability to cope with a difficult and strenuous curriculum (may be a result of high morale).
- . General attitude of confidence and less apprehension about passing SBTPE.
- . Willing and eager to take responsibility for their own learning.

There appeared to be fewer students employed and particularly fewer students employed full-time but no hard data were available to support this statement.

QUESTION

Describe the characteristics of the nursing students. How many of the students are employed either full-time or part-time?

Is there a policy on student employment?

3.2 SELECTION

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DESCRIPTION

College and nursing department admission policies in high achiever programs involved screening students in order to be highly selective. Questionnaires were tabulated to determine the admission criteria for each program. Percent of programs in each criteria category were:

Admission Criteria	Achievement of Graduates on SBTPE	
	Top Third	Bottom Third
High school graduation or high school equivalency diploma only	10%	56%
High school graduation plus one of the following GPA average, test scores, pre-requisites	30%	0%
Three or more criteria for acceptance to program	60%	44%

Nursing department promotion policies in high achiever programs involved screening students in order to be highly selective for advancement from one nursing course to the next. A "C" was the minimum acceptable grade for progression in nursing courses.

QUESTION

What criteria are used (a) for selecting students admitted to the nursing program and (b) for advancing students from one nursing course to the next?

AREA 4: CURRICULUM AND INSTRUCTION

4.1 OBJECTIVES OF THE PROGRAM

DESCRIPTION

Chairperson, faculty, and students in high achiever programs had a clear understanding of the goals and objectives of the program. Course and daily objectives were clearly stated in writing, had been communicated to students, and most were in measurable terms.

QUESTION

Have the program, course, class, and clinical objectives been developed? Are all objectives (a) clearly stated in writing, (b) communicated to students, (c) stated in measurable terms, and (d) periodically reviewed?

4.2 ORGANIZATION OF THE PROGRAM

DESCRIPTION

Curriculum in high achiever programs was organized:

- Around clinical content areas.
- With a clear mechanism for coordination among instructors within and between nursing courses.
- With a clear mechanism for coordination of classroom and clinical instruction.
- To enable students to take non-nursing courses in a sequence which fitted in with nursing courses.

Classroom and clinical experiences were scheduled with apparent concern for students, i.e. travel arrangements, previous health-occupation preparation, and experiences needed.

QUESTION

How was the rationale for curriculum sequence and continuity determined? Describe the mechanisms for coordination (a) among instructors within and between nursing courses, and (b) between classroom and clinical instruction. How is scheduling done to enhance student learning?

4.3 CLIMATE FOR LEARNING

DESCRIPTION

A general climate for innovation in high achiever programs was evidenced by the presence of:

- Better developed and more abundant teaching materials and media.
- Ready access by students to these materials developed by the faculty and more being developed.
- More opportunities for students to be responsible for their own learning.

QUESTION

What opportunity and encouragement are offered faculty for innovation in teaching? Have faculty introduced any special instructional techniques? Have faculty developed any teaching materials or media?

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4.4 DISTRIBUTION OF NURSING EDUCATION HOURS

DESCRIPTION

Questionnaire data indicated a statistically significant relationship between a higher number of nursing hours spent in the classroom and high achievement. There was a tendency also for these programs to have more hours of campus laboratory instruction and less hours of clinical laboratory instruction. Data are summarized in the following table:

Clock Hours of Instruction	Achievement of Graduates on SBTPE	
	Top Third	Bottom Third
Classroom hours	298.2	265.5
Campus lab hours	54.2	35.3
Clinical lab hours	505.6	527.5
TOTAL PROGRAM	858.8	831.8

QUESTION

How are the nursing education clock hours distributed between the classroom and laboratory?

AREA 5: RESOURCES, EQUIPMENT, AND FACILITIES

DESCRIPTION

Nursing laboratories (skills, audio-visual, independent learning) in high achiever programs were:

- Well equipped.
- Open for long hours.
- Staffed with faculty, laboratory technician, or trained student worker to assist the nursing students.

College and nursing departments were located in very appealing physical surroundings; classrooms and laboratories were spacious and attractive.

QUESTION

What types of nursing laboratories do you have? How are they equipped and staffed? What hours are they available for student use? Is classroom and laboratory space adequate? If not, what is needed?

AREA 6: EDUCATIONAL OUTCOMES

6.1 CURRICULUM REVISION

DESCRIPTION

Primary emphasis in curriculum revision in high achiever programs was placed on:

- Clarifying goals and objectives.
- Reviewing and questioning existing practices in terms of how the program could best enhance student learning.

Follow-up studies of graduates conducted by the chairperson or a designated faculty member were used in planning curriculum revisions.

QUESTION

When was the last major curriculum revision? On what bases are curriculum revisions made?

6.2 EVALUATION OF STUDENT ACHIEVEMENT

DESCRIPTION

Evaluation of student achievement in high achiever programs was well planned and implemented as evidenced by:

- Type and frequency of measurement of both classroom and clinical performance.
- Departmental cooperation in establishing standards and developing test items.
- Use of test grids and item analysis.

QUESTION

Describe the types of evaluations used for classroom and clinical performance. What mechanisms are used by the faculty to improve student evaluation? What procedure is used to improve evaluation instruments?

6.3 PREPARATION FOR THE LICENSING EXAM

DESCRIPTION

Review techniques are incorporated into high achiever programs, i.e. faculty might use several class sessions at the end of the semester for questions and summarization of their courses.

Chairpersons and faculty have provided the opportunity for students to practice handling certain types of test items similar to those used on the licensing exam. Each high achiever program used at least two of the following techniques:

- Administered the NLN achievement examination.
- Participated in taking proficiency and external degree examinations for question validation.
- Developed objective, situation-type test items for course examinations.

QUESTION

Describe the techniques used for assisting students in (a) reviewing for SBTPE and (b) developing test-taking skills.

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APPENDICES

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APPENDIX A

NURSING EDUCATION UNIT RECORDS

1. Name of Program _____

2. Age of Program _____

3. Admissions and Graduations in ADN Programs

Admitted in October of	Graduated in		Attrition Rate
1968	1970		
1969	1971		
1970	1972		
1971	1973		

4. Fall 1972 Student Enrollment

ADN _____ Total College _____ ADN % of College _____

5. SBTPE Scores

	Passing Rate	Rank
1970		
1971		
1972		
1973		
Average		

APPENDIX B

SURVEY OF ASSOCIATE DEGREE IN NURSING PROGRAMS

1971 - 1973

_____COLLEGE

Instructions: Read and respond to the questionnaire in terms of students, faculty, and the program of the department in your college offering the Associate Degree in Nursing. The objective of the questionnaire is to gather information about the characteristics of the program which was available for students who graduated in 1973.

I. Chairman of the Program

A. How many persons have held the position of chairman since September, 1969? _____

B. Estimate to the nearest 5% the amount of time spent by the chairman at the following types of tasks:

Personnel Administration	_____
Financial Administration	_____
Curriculum Administration	_____
Total Department Administration	_____
Admission and transfer of students	_____
Teaching	_____
Other activities	_____
TOTAL	100%

II. Health Services Programs

Were there other health-related programs in your college?

Yes _____ No _____

If the answer is "yes", list the names of the programs and the number of graduates of that program in 1973.

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III. Number of Nursing Faculty Members

School Year	Total Number of ADN Faculty		Number of the Total Who Were Newly Appointed	
	Full-time	Part-time	Full-time	Part-time
1969-70				
1970-71				
1971-72				
1972-73				

IV. Nursing Faculty Background Information for 1972-73 School Year Only

A. Number of faculty at each academic rank

Instructor _____ Professor _____

Assistant Professor _____ Other (Specify) _____

Associate Professor _____

B. Number of faculty whose highest degree earned was:

Associate Degree/Diploma _____

Bachelors _____

Masters _____

Doctorate _____

C. Number of faculty whose highest degree was earned between:

1970 - 1973 _____ 1955 - 1959 _____

1965 - 1969 _____ 1950 - 1954 _____

1960 - 1964 _____ before 1950 _____

D. Number of faculty whose age was between:

20 - 24 _____ 40 - 44 _____

25 - 29 _____ 45 - 49 _____

30 - 34 _____ 50 or older _____

35 - 39

E. Number of faculty with some formal preparation for teaching _____.

F. Number of faculty who participated in a formal continuing education experience within the last three years (include work toward higher degree as well as inservice education) _____.

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G. Number of faculty whose total years of teaching experience in any type of nursing education program was:

0	_____	11 - 15	_____
1 - 5	_____	16 - 20	_____
6 - 10	_____	21 or more	_____

H. Number of faculty whose total years of nursing services experience was:

0	_____	11 - 15	_____
1 - 5	_____	16 - 20	_____
6 - 10	_____	21 or more	_____

V. Approximate Student/Faculty Ratio in Nursing Courses

	1971-72 First Year Students	1972-73 Second Year Students
In the Classroom	_____	_____
In the Campus Laboratory	_____	_____
In the Clinical Laboratory	_____	_____

VI. Total Number of Credit Hours

In Nursing Courses required for the ADN degree _____

Required for graduation with an ADN degree _____

VII. Distribution of Nursing Education Hours

	Number of Classroom Hours	Number of Campus Laboratory Hours	Number of Clinical Laboratory Hours	TOTAL NUMBER OF CLOCK HOURS
First Year 1971-72				
Second Year 1972-73				
TOTALS				

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VIII. Financial Information for 1972-73 School Year

A. Was there an approved budget identifiable for the nursing department and separate from other health programs?

Yes _____ No _____

B. Over the past four years has the nursing department's budgetary support increased commensurate with inflation and/or program expansion?

Yes _____ No _____ (please explain)

C. Were full-time nursing faculty salary levels comparable with faculty of similar rank in other departments of the college?

Yes _____ No _____ (please explain)

D. Indicate the amounts expended for the 1972-73 school year for the following items by source of funds.

	From College Appropriations	Other Funds (please specify)
Salaries and Wages	_____	_____
Supplies	_____	_____
Equipment	_____	_____
Travel	_____	_____
Other Expenses	_____	_____
TOTAL EXPENDED	_____	_____

IX. Admission Practices for September, 1971

A. Number of applications received for admission to the college _____

Number of applications accepted for admission to the college _____

Number of applications received for admission to ADN program _____

Number of applications accepted for admission to ADN program _____

B. Did your college have a policy of open admissions for the 1971-72 school year?

Yes _____ No _____

C. How was the size of the freshman class of the ADN program determined for the 1971-72 school year?

D. What criteria were used for selecting students admitted to the ADN program in September, 1971? What percent of these students were admitted on the condition that they participate in some type of remediation or developmental skills program?

APPENDIX C

INTERVIEW SCHEDULE

Organization and Administration

1. What are the responsibilities and authority of the chairman in:
   Recruitment and procurement of faculty
   Admitting students
   Financial management
   Promotion and personnel policies
   Public relations

2. How are department chairmen selected?

3. Is the department leadership diffused? What other individuals in the department have special responsibilities? What are they?

4. Is the program adequately supported financially? If not, what is needed?

5. Is the nursing program an integral and respected part of the college? Do nursing faculty serve on college committees? Do they have the same benefits and privileges as other faculty in the college?

Faculty

6. What kind of faculty is needed by your department, considering educational background, professional experience, diversity, personal attitudes, etc.? How well does the present faculty as a whole match these qualifications?

7. What are the responsibilities of the nursing service staff who work in the cooperating institutions with the nursing students? What qualities in a nursing service staff would enhance student learning? How well do they match these qualifications?

8. What was the proportion of faculty turnover in your department in the past four years? What were the principal reasons? Were these mostly senior or junior faculty? Is this turnover proportion acceptable to you?

9. How many new faculty members did you appoint in the last four years? Were they new positions or replacements? Do their educational qualifications differ greatly from faculty who have been with the program for some time?

10. What are the policies regarding renewal of contracts, promotions, and granting of tenure? Is teaching effectiveness appraised as part of this procedure? Is the department policy different from the college policy?

11. What evidence is there of professional growth in the faculty? Do personnel policies reward faculty for efforts to keep current in their field?

12. What is the normal teaching load for a faculty member? Is the load a function of the contract? What would be the average number of student contact hours per week? The average number of hours spent in other faculty responsibilities?

Students

13. What are the characteristics and qualifications of the students that enroll in the nursing program? Do you encourage the enrollment of minority group members, rural poor, older adults, and men?

14. What kind of financial assistance is available to students? Approximately what percent of your students are assisted in this way? Approximately what percent of your students are working?

15. Do the students in the department show a wide range of academic ability and preparation? How do you encourage those with exceptional ability to take advantage of it?

16. Does the college provide and/or mandate remediation assistance for students with deficiencies? How does the nursing program help students to compensate for these deficiencies? How are people in need of remediation identified?

17. How does the college and the department fulfill their responsibilities in advisement? Does departmental advisement of students include both personal and academic counseling? What is the department's relationship to student personnel?

18. To what extent do students participate in decision-making in the department? Is there regular participation by students on some faculty committees, e.g., curriculum?

19. Are nursing students mixed with other students for non-nursing classes? Are they treated differently from other college students?

Academic Program and Instruction

20. How was the curriculum developed? Were local or regional needs and resources considered? How was course content and sequencing determined?

21. What major revisions were made in the curriculum over the last four years? By whom? On what bases were decisions made to revise the curriculum?

22. Have the goals and objectives of the program been revised during the past four years? Have objectives or competencies been developed for each course? Are they stated in measurable terms?

23. How are clinical experiences selected? Are there objectives for each clinical experience? How are classroom and clinical experiences coordinated? To what extent is the college able to control the clinical experiences which students receive?

24. How have other college faculty been helpful in strengthening the nursing curriculum? Are you satisfied with the courses other than nursing that are required for completion of the program?

25. How are faculty members helped to evaluate and improve their teaching? Do students have a role in the evaluation of teaching?

26. What opportunity and encouragement are offered faculty for innovation in teaching? Have faculty introduced any special teaching techniques in the last four years? What are they?

Resources, Equipment, and Facilities

27. Have there been any significant changes in faculty offices and workrooms over the last four years? Are they adequate in size, number, privacy?

28. Over the last four years have you had sufficient numbers and types of clerical and other supporting staff within the department?

29. Over the last four years have you had sufficient classroom and laboratory space? Does scheduling permit maximum use of these facilities?

30. Have you had sufficient clinical resources to support the program? Is there sufficient variety to make agency selection possible? Is there competition for clinical agencies from other nursing or health programs?

31. How has the library collection in support of the nursing program been improved over the last four years? Is it a convenient and attractive place to study? Is the library staffed with prepared personnel to assist students?

32. How have instructional materials and laboratory equipment improved over the last four years? Are they adequate in quality and quantity? Are there audio-tutorial facilities?

Evaluation

33. What measuring instruments do you use in evaluation of the program's effectiveness? Who is responsible for the evaluation? How frequently is the evaluation done? As a result of this evaluation what changes have been made?

34. How do you use information related to student performance for program revision?

35. How do you use the results of the licensing examination for program revisions? Has the success rate been about what you would have predicted?

36. How do you use follow-up studies of graduates for program revisions? What do these studies show about the on-the-job success of your graduates? Is this about what you would have predicted?

37. What type of measuring devices have been used in the nursing program to determine if the students are achieving the objectives (classroom and clinical) of the courses and the program? How is performance in the clinical setting combined with classroom performance for grading purposes?

38. Do you do specific things to prepare students for the licensing exam?

39. If you have admitted some students who have not fully qualified under normal admission criteria, what has been their success in completing the program? On the licensing examination?

Overall Evaluation

40. What in your opinion are the factors which have the greatest influence on the students' performance on the licensing examination? Do they differ in any way from factors which influence the quality of your program?

APPENDIX D

STUDENT SURVEY INFORMATION

1. Sex

2. Marital Status at First Enrollment

   Single
   Married
   Divorced/Separated

3. Age at First Enrollment

4. Amount of Previous Education

   High School
   High School Equivalency
   Some College
   AA
   BA/BS

5. Rank in High School Class (by quartiles)

6. Number of Semesters of High School Science (completed and passed)

7. Number of Semesters of High School Math (completed and passed)

8. New York State College Entrance Examination Score (RSE)

9. Grade in Nursing from Semester 1 to Semester 2

   Increased
   Decreased
   Stayed the Same

10. Overall Grade in Nursing for Year 1 (A, B, C, D)

11. College Overall Grade Point Average from Semester 1 to 2

    Increased
    Decreased
    Stayed the Same

12. College Overall GPA (Semesters 1 through 4)

13. Previous Training in the Health Field

    LPN
    Transfer from Diploma School
    Transfer from ADN Program
    Transfer from BS Program
    Health Technician

14. Previous Work Experience in the Health Field

    Aide
    LPN
    Technician
    Corpsman-Orderly

15. Scores on the NLN Achievement Exam

    Med-Surg I
    Med-Surg II
    Obstetrics
    Nursing of Children
    Psychiatric

16. Scores on the SBPTE

    Medical
    Surgical
    Obstetric
    Pediatric
    Psychiatric

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APPENDIX E

COMPARISONS OF PROGRAM CHARACTERISTICS USING THREE CATEGORIES OF PROGRAMS DETERMINED BY THE PASSING RATE ON THE SBTPE

VARIABLES	TOP THIRD		MIDDLE THIRD		BOTTOM THIRD	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Nursing faculty at the following academic ranks:						
(a) Instructor	42	33	63	39	69	29
(b) Assistant Professor	44	35	39	24	96	40
(c) Associate Professor	21	17	19	12	28	12
(d) Professor	9	7	10	6	7	3
(e) Other	10	8	30	19	37	16
Nursing faculty whose highest degree was earned between:						
(a) 1970-73	21	17	37	23	84	33
(b) 1965-69	55	44	60	38	76	30
(c) 1960-64	23	18	43	27	50	20
(d) 1955-59	16	13	11	7	26	10
(e) 1950-54	4	3	3	2	10	4
(f) before 1950	7	5	4	3	6	2
Nursing faculty whose ages are:						
(a) 20-24	0	--	8	5	5	2
(b) 25-29	16	13	28	16	18	7
(c) 30-34	25	20	33	19	40	15
(d) 35-39	28	22	35	20	50	19
(e) 40-44	23	18	34	20	61	24
(f) 45-49	19	15	18	11	41	16
(g) 50 or above	15	12	15	9	45	17
Nursing faculty whose years of teaching experience are:						
(a) 0	4	3	11	7	1	0
(b) 1-5	58	46	73	43	118	46
(c) 6-10	38	30	52	31	91	36
(d) 11-15	18	14	22	13	30	12
(e) 16 or more	9	7	10	6	15	6

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VARIABLES	TOP THIRD		MIDDLE THIRD		BOTTOM THIRD	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
Nursing faculty whose years of nursing service experience are:						
(a) 0	0	-	0	-	2	0
(b) 1-5	40	35	66	40	111	44
(c) 6-10	45	39	55	33	87	35
(d) 11-15	22	19	27	16	37	15
(e) 16 or more	8	7	19	11	14	6
Schools with approved budget identifiable for nursing	9	82	9	82	8	80
Departments whose budgetary support has increased commensurate with inflation and/or program expansion	10	91	9	82	9	90
Departments whose nursing faculty salary levels were comparable with faculty at the same rank in other departments	11	100	10	100	10	100
Departments whose criteria for admission were						
(a) High School Graduation or Equivalency	1	9	1	9	6	56
(b) High School Graduation plus one of the following: GPA Average, test scores, prerequisites	4	36	4	36	0	0
(c) Three or more criteria for acceptance	6	54	6	54	4	44

APPENDIX F

SUMMARY DESCRIPTIONS FROM PROGRAM VISITS

(Note of Explanation: Following the visit to each college, the visitation team attempted to describe the program using each item on the interview schedule. The summary description below is a composite of all eight programs visited. It is presented to the interested reader as a demonstration of the diversity of ADN programs in New York State.)

Organization and Administration

The selection of the department chairperson had been done in seven schools through faculty election for terms which ranged from one to three years. The remaining chairperson had been appointed by college administration. Qualifications of the chairperson varied in terms of academic preparation from the baccalaureate to the doctoral degree as the highest degree earned. All chairpersons had nursing backgrounds and most were considered leaders in the nursing community. Chairpersons differed in their interest in or ability to exert leadership within the college. Some chairpersons had a long-time connection with the community; some were former faculty members in their department. Great variations existed in personal characteristics and leadership styles of the chairperson. The tenure of the present chairperson varied from one to five years; some departments had chairperson turnover every couple of years.

The responsibility and authority of some chairpersons were limited to personnel matters; other chairpersons were involved in teaching, admission of students, financial management of the department, and public relations. Most (but not all) chairpersons had some responsibility for developing an operational budget for their department. Diffusion of departmental leadership

was observed in all of the larger departments. Two programs had assistant department chairpersons; all programs had coordinators by semesters or for each year. The adjunct administrators usually had some released time for their additional responsibilities. Most departments had standing committees although the smaller departments functioned as a committee of the whole.

Financial support for the department was perceived by the chairperson as "poor" to "adequate" to "good." All programs had received major support from Federal capitation and/or State expansion funds in recent years.

When questioned about their relationship to the rest of the college, chairpersons and faculty members saw themselves generally as a respected but not necessarily an integral part of the college. Reasons were viewed as resulting from physical isolation, off-campus clinical responsibilities, scheduling problems, and being a primarily female faculty.

In the past four years the department growth had varied from slight increases in some programs to a quadrupled student population in one program. Most departments felt that their growth rate had finally stabilized.

Faculty

Qualifications of faculty varied among and within the departments. A Masters degree was generally viewed as desirable and was the most common type of degree held, but only one of the departments had all faculty with this level of education. There was an occasional faculty member with the associate degree or with a doctoral degree. All chairpersons were interested in having faculty with prior clinical experience; most chairmen also stated a preference for prior teaching experience and for full-time faculty. Acquiring faculty who meet these qualifications was much more difficult in small communities than in larger metropolitan areas.

Interpersonal relations skills were considered important when selecting

new faculty. Chairpersons and faculty looked for people who were "flexible," "willing to work in a group," and who "fit in."

Faculty stability was examined in two ways: turnover of personnel and acquisition of new positions. Turnover ranged from a low of 2 percent a year to an almost complete change of faculty in one school. Reasons for leaving were generally given as personal rather than incompetence in teaching. Newly appointed faculty did not appear to differ greatly from more stable staff. All programs had added at least one new position in the past four years; one program had increased faculty almost sevenfold.

Every nursing department followed the college policy on promotion, salary increments, and tenure. Most departments had personnel committees which made recommendations to college personnel committees. The chairperson was usually a member of both department and college personnel committees. Recommendations for promotion and tenure were generally made by this committee to the college personnel committee; salary increments tended to be automatic in most colleges. Programs were evenly divided between the acquisition of tenure at the fourth or sixth years. Teaching expertise was the primary criterion for promotion, although some colleges also considered advanced degrees, publications, and professional activities. Chairperson, colleague, and student evaluations were used in various combinations to determine teaching expertise. There were some feelings of sex discrimination in promotion policies since nursing departments had few faculty members holding the top two academic ranks.

Professional growth was evidenced in the number of faculty working toward advanced degrees and/or participating in continuing education experiences. Chairpersons generally reported enthusiasm for workshop attendance but stated that often the same faculty were involved each time. Clinical

coverage presented one of the main deterrents to increased involvement in professional activities.

Faculty teaching load was difficult to assess with accuracy. Various programs reported from 12 to 22 contact hours per week exclusive of office hours, committee work, and travel time. Teaching load for the chairperson ranged from zero to a full teaching load.

Students

The characteristics and qualifications of students in all programs were heterogeneous. Students with experiences in the health field and older students were common in all programs; no program had a very high proportion of men; the number of minority students varied greatly from school to school. All colleges had some type of open admission policy; most departments of nursing used additional criteria in determining which applicants would be admitted to the program.

Financial assistance was available to students at each college and seemed sufficient to address genuine hardship situations. However, married students tended to find the available assistance inadequate and were usually employed, sometimes full-time. Students viewed the opportunity to work as one of the advantages of the ADN program.

Very little was being done to provide special opportunities for students with exceptional academic ability. One program had a self-paced curriculum and such a program was being developed in another school. Students expressed the feeling that the nursing program was generally too demanding to create a desire to accelerate in their classes. All programs offered advanced standing credit for the first nursing course on the bases of the College Proficiency Examination in Fundamentals of Nursing.

Many opportunities were provided for students with learning difficulties or academic deficiencies, because this was seen as a more common problem. Deficiencies in reading and mathematical skills were mentioned as a problem in every program. Learning difficulties were most frequently handled through college remediation programs, individual help by instructors, and course repetition; less frequently used solutions were tutors, self-paced instruction, and supplementary instructions. Academically disadvantaged students either withdrew from the program or took longer to complete the program.

Some faculties were responsible for both academic and personal advisement of students. Counseling centers were used for referrals of more serious personal problems. The student's instructor for clinical experiences was often assigned as the advisor for the first year with less formal arrangements during the second year.

There was little organized participation in departmental decision-making by students. Student groups differed greatly in their interest in formal participation and in their feelings about whether faculty listened to their recommendations. Students were usually involved in teacher evaluation and less often in course or program evaluation.

Interpersonal relations among students and between students and faculty were mostly positive. Students viewed most faculty members as receptive and available to them when they needed help. Some student groups demonstrated strong cohesiveness; two student groups said that the nursing department was like a family.

Curriculum and Instruction

Curriculum development had usually been the work of a small group initially, with gradual involvement of the entire nursing faculty. Local

and regional needs did not influence planning of course content to any great extent. Since most ADN programs are relatively new, much of the curriculum development in recent years had been an attempt to get some ideas on paper. This initial effort has gradually resulted in more explicit and detailed planning for courses and units.

Curriculum revisions were described as ongoing in almost all programs. These revisions were usually made by the faculty groups teaching individual courses and sometimes through a curriculum committee. Revisions were prompted by available clinical experiences, SBTPE results in one or more clinical areas, changing student populations, student reactions to programs and/or the accomodation of faculty preferences in content and scheduling.

Most schools divided the curriculum content into 4-6 nursing courses with the greatest number of credit hours in the second year. The most common problems mentioned were difficulties resulting from trying to include too much in the curriculum and difficulties in coordinating classroom with clinical experiences.

Every program had developed some written objectives. These objectives ranged from global and general to specific and measurable. Where objectives were written in terms of student behavior, both students and faculty commented on their usefulness.

Evaluation of teaching tended to be informal in most schools except when it was required for promotion and tenure. Student evaluations of the instructor's teaching ability were often used. Colleague and chairperson evaluations were less frequently used.

Some colleges and departments of nursing provided a climate which was conducive to innovations in teaching. While every program was making at least minimal use of audio-visual materials, the use of other instructional

innovations was limited to a few schools.

The qualities of the nursing service staff with whom the faculty worked differed with the agency and the individuals involved. Both faculty and students viewed nursing service personnel as generally helpful and capable but every school reported some difficulties with certain individuals.

Clinical experiences were selected by faculty. Most agencies were also used by students from other types of nursing programs. The quality of the clinical experience seemed to be more closely related to faculty expertise than to the actual availability of an uncrowed agency. Faculty/student ratios during clinical practice were often one to 10-12 although one program reported a one to 22 ratio for first year students. Coordination of classroom with clinical experience was explored by the visitors through examination of course outlines and discussions with students and faculty; it varied from "clear weekly and daily objectives for both" to "nonexistent". Some programs used different instructors for classroom and for clinical teaching.

Non-nursing courses were described as an occasional problem in every school, usually because of inappropriate or constantly changing course content. Problems were usually worked out informally between the faculty members of the departments involved. Generally the reaction to support courses was quite positive.

Resources, Equipment, and Facilities

Most faculty members shared two-person offices although this varied up to ten faculty per office in one school. Office space tended to be crowded and scattered throughout one building or sometimes the total campus.

Clerical staff was usually considered adequate but not abundant. Several schools supplemented regular secretarial services through a college typing pool or through the use of student help. Three programs had lab

technicians and/or audio-visual technicians.

Room size seemed to be more of a problem than actual availability of classroom space, and was a college problem. Nursing laboratories varied greatly in size, attractiveness, and availability to students. Most programs had used Federal capitation and/or State expansion funds over the last four years to purchase instructional materials and laboratory equipment. Materials varied from "abundant and well-used" to "inadequate and/or poorly used."

Every faculty group was positive about the cooperativeness of the college library staff and the adequacy of the library collection in nursing. Both faculty and students reported limited use by students.

Educational Outcomes

Evaluation of performance in both classroom and clinical laboratories were used by all programs to assess student achievement. Multiple-choice examinations were used to some extent in all programs; some tests were constructed around course objectives; some item analysis was used.

Satisfactory clinical performance had little effect on a passing course grade but an unsatisfactory clinical performance resulted in a "D" or "F" for that course. All programs either have (or are changing to) a minimum of "C" in each nursing course before permitting the student to move to the next course in the nursing sequence.

Evaluation of program effectiveness tended to be informal. Students were sometimes asked to evaluate courses and one school had students evaluate the total program immediately before graduation. Several schools used part of June for a faculty conference and a general reassessment of the total year.

Four departments had done some type of follow-up study of graduates

during the past four years; none of these studies were related to job performance. Faculty reported occasional conversations with graduates and contact with graduates in the agencies as useful techniques for evaluating the program.

All programs were using the results of the licensing examination to make program revisions. Sometimes the changes were minor, i.e. adding experiences because one area on the SBTPE was low; sometimes major modifications of the curriculum had taken place and low SBTPE scores were listed as a major factor. Every program had specific techniques for preparing students for the licensing examination. Most frequently used techniques included the use of NLN achievement examinations, multiple-choice testing with discussion of the questions afterwards, review sessions, participation in question validation for the Regents A.A.S. external degree program, and suggested use of commercial review guides.

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APPENDIX G

COMPARISONS OF STUDENT CHARACTERISTICS USING THREE CATEGORIES OF PROGRAMS DETERMINED BY THE PASSING RATE ON THE SBTPE

PART A Means and Standard Deviations for Continuous Variables

VARIABLES	TOP THIRD		IMPROVING		BOTTOM THIRD	
	MEAN	SD	MEAN	SD	MEAN	SD
Age	25.87	8.50	27.77	9.54	26.65	9.34
Math	4.71	1.97	4.48	2.09	4.76	2.13
Science	5.10	1.80	4.49	1.77	5.07	1.77
GPA1	2.85	.66	2.63	.65	2.61	.61
GPA2	2.75	.61	2.58	.63	2.67	.71
GPA3	2.60	.64	2.65	.58	2.45	.67
GPA4	3.07	.58	2.79	.59	2.51	.65
SBTPE Med	516.47	88.24	504.94	95.59	392.22	121.37
SBTPE Surg	524.24	88.52	493.08	95.85	382.72	121.48
SBTPE Obs	536.01	93.31	482.74	101.31	404.07	110.24
SBTPE Child	513.24	98.72	505.91	97.22	413.92	115.23
SBTPE Psych	541.95	91.35	501.43	100.93	428.74	114.57

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PART B Frequency Distribution and Percentages Passing SBTPE for Nominal Variables

VARIABLE	TOP THIRD		IMPROVING		BOTTOM THIRD	
	N	Percent Passing	N	Percent Passing	N	Percent Passing
Sex						
Female	168	92.9	282	84.0	287	43.9
Male	15	80.0	11	72.7	14	42.9
Marital Status	87	88.5	129	75.2	77	49.4
Single	87	88.5	129	75.2	77	49.4
Married	79	95.9	146	89.7	46	52.2
Divorced	12	91.7	6	83.3	1	100.0
Education						
H.S.	89	92.1	178	78.9	85	42.4
H.S. Equiv.	9	88.9	11	90.9	12	41.7
Some College	75	90.7	57	93.0	39	74.4
A.A.	7	100.0	0	0.0	0	0.0
B.A./B.S.	3	100.0	2	100.0	0	0.0
Rank in H.S.						
1st Quartile	52	96.2	18	100.0	13	84.6
2nd Quartile	48	87.5	22	86.4	21	66.7
3rd Quartile	28	89.3	26	65.4	34	55.9
4th Quartile	17	88.2	13	84.6	12	8.3
GPA Nursing Semester 1 to 2						
Increase	22	95.5	75	77.8	41	51.2
Decrease	39	87.2	68	77.9	90	35.6
Remains Same	111	91.9	130	87.7	108	51.9
GPA Overall Semester 1 to 2						
Increase	45	95.6	116	81.9	52	55.8
Decrease	87	85.1	131	83.2	50	46.0
Remains Same	37	100.0	30	83.3	18	55.6
Previous Health Training						
None	120	91.7	88	81.8	91	46.2
LPN	34	88.2	29	86.2	26	57.7
Diploma School Transfer	15	93.3	1	100.0	4	75.0
ADN Transfer	3	100.0	2	100.0	2	50.0
BS Transfer	6	100.0	2	100.0	2	100.0
Health Tech	6	100.0	0	0.0	6	66.7

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VARIABLE	TOP THIRD		IMPROVING		BOTTOM THIRD	
	N	Percent Passing	N	Percent Passing	N	Percent Passing
Previous Work						
None	95	90.5	47	85.1	89	49.4
Aide	38	97.4	38	81.6	12	50.0
LPN	33	90.9	29	86.2	23	52.2
Technician	10	90.0	0	0.0	7	71.4
Corps-Orderly	7	85.7	4	50.0	0	0.0
Grade Nursing First Year						
A	15	100.0	9	100.0	17	82.4
B	79	89.9	78	99.0	98	68.0
C	70	80.0	131	94.0	107	26.0
D	5	100.0	55	47.0	21	5.0

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PEARSON-PRODUCT MOMENT CORRELATIONS BETWEEN SECTIONS OF THE NLN ACHIEVEMENT TEST AND SBPTE

	SBPTE Med	SBPTE Surg	SBPTE Obs	SBPTE Ped	SBPTE Psych
NLN Med Surg I N=240	.31	.29			
NLN Med Surg II N=343	.46	.34			
NLN Obstetrics N=318			.71		
NLN Child N=422				.72	
NLN Psych N=375					.63

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